## PROCEEDINGS

OF THE

## NEW ENGLAND ZOÖLOGICAL CLUB

## SIXTEEN NEW SPHINGIDAE

BY BENJAMIN PRESTON CLARK

Of the new sphingid forms described in the following pages ten are new species, three are new subspecies, and three are aberrations. Seven of them are from North America, including Mexico; of the others one is from Central America, one from the West Indies, two from South America, two from Africa, one from Madagascar, and two from Polynesia.

The discovery of such a number of Sphingidae in a relatively short time, together with the recent publication by Lord Rothschild and Dr. Karl Jordan of thirteen new forms, make it evident that many more must still await description. South America, Africa and Polynesia appear to offer the most promising fields for research.

It may be proper to state that my collection has now, in the course of eight years, reached a total of a thousand species and subspecies, represented by some 6500 specimens. It is my hope that, in the future, it may be the principal reference collection in the Western Hemisphere, and may serve to demonstrate geographical distribution as well as to aid the classification and determination of species.

It is a pleasure to be able to bear testimony to the kindness and the ability of all those who have given me assistance in my
work. Great as is the pleasure of coming to know, even imperfectly, one tiny spot in nature, the joy of counting as friends all these who have helped me, is far greater. In many walks of life I have found missionaries and priests of different faiths, curators, scientists, business men, army officers and privates, gardeners, teachers, economic botanists, and many more, - all with a common bond in their intense love for science, and their readiness to advance it. More than four hundred such men have collected specimens that are now in my collection. And the collection has its fullest interest as a human document showing the zeal with which men will unselfishly unite for such a cause.

I must express my regret that the present cost prevents these descriptions being accompanied by colored plates.

When one has made errors, his impulse is to correct them, rather than to leave it to others to discover his mistakes. I wish, therefore, before proceeding to describe the new forms, to make the following corrections in my previous papers in these Proceedings.

Protoparce hoffmanni Clark (Vol. VI, p. 58) is simply a dark form of $P$. lanuginosa Edwards.

Protoparce schausi Clark (Vol. VI, p. 101) proves to be $P$. lichenea, Burm. Its correct locality is Iguala, Guerrero, Mexico; also Tuis, Costa Rica.

Perigonia lusca bahamensis Clark (Vol. VI, p. 108) is simply a large and rather strongly marked form of P. lusca interrupta, Walker.

Isognathus rimosa australis Clark (Vol. VI, p. 65) is, I believe on further examination, a distinct species, and should therefore stand as Isognathus australis.
Sphinx dolli engelhardti Clark (Vol. VI, p. 104) is, as my friend Dr. Karl Jordan has kindly pointed out to me, a subspecies of S. sequoiae, Boisd, and should therefore be $S$. sequoiae engelhardti.

Protoparce hannibal mayi Clark (Vol. VI, p. 58) is a good subspecies, showing, in addition to the distinguishing marks pointed out in the above description, a difference in the genitalia. Penis
sheath is blunt at the point, instead of acute as in $P$. hannibal. This form, however, was described from N. Friburgo as Sphinx hamilcar Boisduval (1875, Spec. Gen. Lep. Het., p. 79, no. 12), and should be known as $P$. hannibal hamilcar Boisd., The name mayi lapses, as a synonym.

In speaking of the type of Lapara halicarniae Strecker (Proc. N. E. Z. C., Vol. VI, p. 102), I said "the color, which I believe to be faded, as are many of the specimens in the Strecker collection." My friend Mr. William J. Gerhard, of the Field Museum, called my attention to the fact that the Strecker collection is in as good condition as could be expected of specimens collected so long ago, and that it compares favorably with the other historic collections. This is entirely true, as it has been well cared for.

## Protoparce kuschei sp. nov.


#### Abstract

Al. ant. long., $\delta^{7}, 39 \mathrm{~mm}$.; $\odot, 46 \mathrm{~mm}$. Al. ant. lat., $\delta^{7}, 16 \mathrm{~mm}$.; ㅇ, 19 mm . Marg. ext., $\sigma^{7}, 21 \mathrm{~mm}$.; $\circ, 25 \mathrm{~mm}$.

Habitat. - Venodio, Sinaloa, Mexico. Four males and two females in coll. B. Preston Clark, collected by Mr. J. August Kusche, June - August, 1918.

This species is closely allied to P. dilucida Edwards. The males are very difficult to distinguish, and I am not sure, after comparing a series of each species, of any certain means of distinction except the genitalia. The tooth of the penis sheath of this species is shorter than that of P. dilucida, and blunt instead of sharply acuminate.

The female, while showing the same maculation as $P$. dilucida, is readily distinguishable from it. The fore wing above is more uniform in color, the ground tone of both fore and hind wings above is gray with markings of darker gray and black, differing thus from P. dilucida, with its ground tone of brown and sharply contrasting white markings. Fore and hind wings below are gray, as compared with the brown of $P$. dilucida. The sharply marked white area of P. dilucida, extending in the female between M2 and the inner margin from the sub-basal portion of the wing more than halfway to the hinder angle, is in this species entirely lacking.


## Chlaenogramma corumbensis sp. nov.

Al. ant. long., $\mp, 56 \mathrm{~mm}$. Al. ant. lat., $\uparrow, 23 \mathrm{~mm}$. Marg. ext., $\mp, 30 \mathrm{~mm}$. Habitat. - Corumba, Matto Grosso, western Brazil. One female in coll. B. Preston Clark, received from Dr. O. Staudinger and A. Bang-Haas. The largest of the known Chlaenogrammas, and a beautiful form. Palpi white at base, with dark brown inner margin; dark brown at tips, irrorated with white. Antennae white above, brown below. Wing fringes brown at the veins, white between them. Head, thorax and abdomen above, gray. Collar dark brown, lightly bordered with yellow anteriorly, and tipped with white posteriorly. Two dark brown median spots at base of abdomen above. Legs brown, irrorated with white, especially at the joints. Abdomen below white, with four prominent median dark spots; dark brown side patches, bordered with white, on every segment.

Fore wing above: White irrorated with brown, the resultant color being gray. Two dark brown spots on costal margin, 6 mm . and 12 mm . distant from the base. A dark brown geminate antemedian line runs irregularly from the costal margin, at a point one third the distance from base to wing tip, to the inner margin, which it reaches at a point one third the distance from base to hinder angle. This geminate line is heavier costally as it approaches the margin. An obscure white stigma at apex of the cell. Two brown postmedian parallel lines, distant from one another 3 mm ., enclose between them a darker area, making an irregular band extending from a point slightly more than half-way from the base to the wing apex, to the inner margin, which it reaches two thirds the distance from the base to the hinder angle. Across this band the two dark streaks, so characteristic of allied forms, extend between R2 and M1, and between M1 and M2, and parallel to them, the first being 10 mm . in length, the second 13 mm . A series of sagittate marks between the veins makes a third irregular band, extending from a point 13 mm . from the wing apex to the inner margin, which it reaches close to the hinder angle. An apical line runs heavily and irregularly to this third band, reaching it between SC5 and R1.

Hind wing above: Basal third dirty white, with dark basal spot, bordered posteriorly by a narrow, brown, lunulate band; the rest of wing gray, with a broad, brown, irregular, submarginal band extending from inner margin to anal angle, and narrowing posteriorly. In the gray postmedian area is a brown line at anal angle, extending obliquely into the wing.

Fore wing below: Basal half dark brown, with lighter area along costal and inner margins; apical area gray; the line of separation between these two areas sharply marked. A faint brown line extends parallel to the line of separation, and 3 mm . distant from it.

Hind wing below: Basal area dirty white. Antemedian band similar in color to that on upper side of the wing. A faint postmedian line runs parallel to it and 3 mm . distant. Submarginal band follows the line of the upper side of the wing, but is fainter.

Sphinx gordius borealis subsp. nov.
Al. ant. long., $0^{7}, 40 \mathrm{~mm}$.; $\circ, 43 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 15 \mathrm{~mm}$.; ㅇ, 16 mm . Marg. ext., $0^{7}, 23 \mathrm{~mm}$., $\uparrow, 24 \mathrm{~mm}$.

Habitat. - Gull Lake, Muskoka, Ontario. One male and one female in coll. B. Preston Clark. Also one male from each of the following localities: Winnipeg, Manitoba; Murray Bay, Quebec; Mount Desert, Maine.

This evidently is a northern form of S. gordius, and it is sufficiently strongly marked to deserve subspecific recognition. The genitalia follow closely those of S. gordius, but the harpe of this form is straighter-edged on one side. That of S. gordius curves evenly to the apex from both sides. In general, borealis is markedly darker, both above and beneath, than gordius. It is gray where gordius is brown. The cilia of the fore wing are more prominently white between the veins, and in the hind wing they are more brightly and uniformly white than in the typical form.

## Poliodes senegalensis sp. nov.

Al. ant. long., $0^{7}, 25 \mathrm{~mm}$.; $\circ, 23 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 9.5 \mathrm{~mm}$.; $\uparrow$, 10 mm . Marg. ext., $0^{7}, 12 \mathrm{~mm}$.; $\uparrow, 11.5 \mathrm{~mm}$.

Habitat. - Kaolack, Senegal. One male and one female (type) in coll. B. Preston Clark, received from Mr. H. Bureau, Paris, France.

Antennae gray above, brown beneath. Head, thorax, and abdomen above, light gray. Breast and abdomen beneath, brown. Mesothoracic tegulæ paler. Dark brown band at base of abdomen above. Lighter in coloration and more distinctly marked than $P$. roseicornis.

Fore wing above: Light gray. An S-shaped line extends from a point on costal margin, 6 mm . from the apex, curving first distally, strengthening, and curving costally, reaching the inner margin 5 mm . from the wing base, and extending slightly along the margin. A lighter-colored, wavy, faint line, 1 mm . posterior to this one on the costal margin, runs roughly parallel to it to the inner margin. Posterior to the first S-shaped line is a dark brown, roughly triangular area, extending nearly to the hinder angle of the inner margin, and with its apex on R3. Within this area is a light-colored line, 3 mm . in length, extending apically and obliquely from a point midway on the inner margin. Between the second postmedian line and the distal margin is a third line, sharply marked, irregularly angled, extending from a point 4 mm . from the apex toward the hinder angle, which it almost
reaches. On the veins $\mathrm{R} 1, \mathrm{R} 2, \mathrm{R} 3$, and M 1 , and between this line and the distal margin, are four dark brown dots. A dark brown, apical, triangular area between SC4 and SC5 extends 3 mm . costaily. Within it, distally, is a lighter, semicircular, marginal area. A dark brown stigma at apex of cell. A dark basal L-shaped mark, with its base at right angles to the costal margin, is very evident in the female, and less so in the male. A narrow, dark, angled, sub-basal line extends from a point 4 mm . from the base on the costal margin to the inner margin. The distal margin of the wing is wavy, produced at R2.

Hind wing above: Smoky gray. Extending from the anal angle submarginally is a dark, sharply marked line to M1. Basad of it, on SM2 and M2, are dark dots. Between these two veins, one third the distance to the wing base, is a dark dash 1 mm . in length. Between the submarginal line and the distal margin is another dark, but less prominent, line. These two submarginal lines extend faintly toward the inner margin, with dark dots on the veins.

Fore wing below: Wood-brown. Lighter along costal margin. A line, from a point on costal margin 7 mm . from the apex, convex distally to the inner margin, which it reaches at its median point. A dark, angled, submedian line duplicates that on the upper side from SC5 to the hinder angle. Distal to this line is a lighter area. Cilia dark at the veins.

Hind wing below: Light brown, similar to marginal area of fore wing. A dark, discal, curved line extends from a point on the inner margin to the anal margin. It first curves sharply distally to R3, basad to M2, and finally basad to anal margin. A dark, angled, postdiscal line extends, roughly parallel to the distal margin, from inner to anal margin. Between it and the margin at the anal angle is a dark area.

## Isognathus allamandae sp. nov.

Al. ant. long., $\sigma^{7}, 30 \mathrm{~mm}$.; $\circ$, 35 mm . Al. ant. lat., $\sigma^{7}, 9 \mathrm{~mm}$.; $\%$, 12 mm . Marg. ext., o ${ }^{7}, 14 \mathrm{~mm}$.; क, 17 mm .

Habitat. - Pernambuco, Brazil. Four males and four females in coll. B. Preston Clark, taken in March by my friend Rev. A. Miles Moss, and named at his suggestion after the food plant. One male also in coll. B. Preston Clark, taken by Mr. T. T. Dyar in February, 1919, at Para, Brazil.

Closely allied to Isognathus australis Clark, but a narrower-winged insect.
Fore wing above: Gray, with darker markings, and lightly shaded with white. More uniform in color than in I. australis. The black streak, R3M1, is 6 mm . in length; a second black streak, M1-M2, is 4 mm . in length; both are heavier than in I. australis, and are absent in the female. Distal margin dentate, convex, and obtusely angled at R3.

The evenly curved white line, SC2-R1, of $I$. australis is absent, being replaced by a straighter, geminate gray line, which takes the same course
but is angled at R3. Veins SC1-M1, inclusive, proximal to this line, are less sharply white with dark dots than in I. australis.

Hind wing above: Marginal band narrower than in I. australis: $\mathbf{3} \mathrm{mm}$. wide at anal angle, 4 mm . at inner angle.

Fore wing beneath: Brown, unicolorous. Yellow band along inner margin more extended than in I. australis.

Hind wing beneath: Yellow basal area more extended than in I. australis, extending obscurely to SC2. Dark marginal border narrow, only 1 mm . wide at hinder angle, as compared with a width of 4 mm . in $I$. australis.

## Hemeroplanes ramsdeni sp. nov. .

Al. ant. long., $\delta^{7}, 29 \mathrm{~mm} . ; ~ \circ, 30 \mathrm{~mm}$. Al. ant. lat., $\delta^{7}, 11 \mathrm{~mm}$; ㅇ, 11.5 mm . Marg. ext., $\sigma^{\top}, 15 \mathrm{~mm}$.; ; 15.5 mm .

Habitat. - Guantanamo, Cuba. One male and one female (type) in coll. B. Preston Clark, given to me by my friend Mr. Charles T. Ramsden, who has males and females in his collection.

Closely related to H. parce Fabr., which it resembles in its maculation. It is a smaller insect; the tip of the fore wing is blunter and less acuminate.

Mesothoracic tegulae prominent, light brown, with a dark brown border mesially and sharply tipped with white posteriorly. Abdomen above with a heavy dark brown median line fading away anally.

Fore wing above: The patch of lunules on the costal margin so prominent in H. parce and in H.inuus, is in this species reduced to a smaller light brown area with traces of lunules. The silvery marking is shaped like a thin leg, from the knee down, with the foot on R3. A broad dark brown line extends costally from a point on the inner margin slightly more than half-way from the base to the hinder angle, terminating on M1.

Hind wing above: Somewhat redder than in H. parce. The heavy line at the anal angle is more sharply marked, and stands out prominently.

Fore and hind wings below: These are like $H$. inuus, but are lighter in color, and the markings are less conspicuous, being obscure and scattered.

## Ampeloeca versicolor ab. lutescens ab. nov.

Al. ant. long., $\sigma^{7}, 30 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 11 \mathrm{~mm}$. Marg. ext., $\sigma^{7}$, 15 mm .

Habitat. - Long Island, New York. One male received from Dr. H. Meeske.

The distinguishing mark of this aberration is the color of the hind wing above, in which the reddish brown of the typical versicolor is replaced by pale yellow. The fore wing above also shows a tendency to yellow.

Ampeloeca myron texana subsp. nov.
Al. ant. long., $\sigma^{7}, 29 \mathrm{~mm}$.; ㅇ, 32 mm . Al. ant. lat., $\delta^{7}, 11 \mathrm{~mm}$.; ㅇ, 14 mm . Marg. ext., $0^{7}, 15 \mathrm{~mm}$.; ㅇ, 16 mm .

Habitat. - A male (type) from Shovel Mountain, Texas, and a male and a female from Jemez Springs, New Mexico, in coll. B. Preston Clark. The male from Texas was received from Dr. William Barnes, and the male and female from New Mexico, from Mr. J. Woodgate.

This form clearly belongs territorially to that group of Sphingidae referred to by the writer (Proc. N. E. Zoöl. Club, Vol. VI, p. 68) as occurring along the Gulf States of the United States, and west into Texas and New Mexico, but in this species the western form has departed sharply from $A$. myron f. cnotus Hubner, of Florida.
It is much lighter in color than either the typical myron or forma cnotus, following in this respect C. myops occidentalis Clark. It is also a somewhat larger insect. The ground tone of the fore wing and hind wing, above and below, is light brown. The darker markings of the fore wing above and below, and of the hind wing below, are a slightly deeper brown. The contrast between the light and dark areas of the fore wing above and below, and of the hind wing below, is much less than in typical myron, this being especially marked in the male.

Ampeloeca myron ab. lutescens ab. nov.
Al. ant. long., $\sigma^{7}, 23 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 10 \mathrm{~mm}$. Marg. ext., $\sigma^{7}$, 12 mm .

Habitat. - New York State. One male in coll. B. Preston Clark, received from Mr. Jacob Doll.

The ground tone of the fore wing above is yellowish; that of the fore wing below is lemon-yellow. The hind wing above is clear lemon-yellow, save for a slight darkening at the anal angle. In other respects it follows the normal myron found in the same locality.

Panacra splendens salomonis subsp. nov.
Al. ant. long., $\circ, 29 \mathrm{~mm}$. Al. ant. lat., $\circ, 12.5 \mathrm{~mm}$. Marg. ext., $\circ$, 16 mm .

Habitat. - Solomon Islands. One female in coll. B. Preston Clark, received from Dr. W. M. Mann.

Differs sharply from the western form. Occiput and mesothorax gray, contrasting sharply with the dark brown mesothoracic tegulae, which shade red posteriorly.

Fore wing above: Semi-transparent discal spot SC5-R1 and smaller whitish spot are both narrower and less conspicuous than in $P$. splendens. Entire wing darker.

Hind wing above: Ochraceous rufous band narrow, becoming obscure at R3.

Fore wing below: Darker in tone than in $P$. splendens. The marginal ochraceous rufous area, which in $P$. splendens extends from the outer half of the inner margin toward the wing apex, narrowing anteriorly, is in this form replaced by a much more restricted area, extending from the median point of the inner margin half-way to the hinder angle, and ending abruptly between R2 and R3. The light spots corresponding to those on the upper side of the wing are smaller and less conspicuous.

Hind wing below: Darker in tone then in P. splendens. The band is reduced in area to correspond with that on the upper side of the wing.

## Amphion nessus f. aest. floridensis subsp. nov.

Al. ant. long., $\sigma^{7}, 23 \mathrm{~mm}$.; $\uparrow, 24 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 8.5 \mathrm{~mm}$.; $\circ$, 9 mm . Marg. ext., $\sigma^{\top}, 11.5 \mathrm{~mm}$.; $\circ, 12 \mathrm{~mm}$.

Habitat. - Parish, Florida. Two males and one female in coll. B. Preston Clark; taken in September, 1918; received from Mr. William Reff.

A darker form than the typical $A$. nessus. The fore wing above lacks the yellow dusting, and the ground tone is so much darker as to lessen materially the contrast between the light and dark areas This gives the impression of greater uniformity of coloration. The median band of the hind wing above is restricted in area, and is obscure. The ground tone of both the fore wing and the hind wing below is darker in tint, thus causing less contrast between the lighter basal and median areas, and the darker marginal portion.

This form evidently is the summer brood.

## Temnora hollandi sp. nov.

Al. ant. long., $\sigma^{7}, 27 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 11 \mathrm{~mm}$. Marg. ext., $\sigma^{7}$, 15 mm .

Habitat. - Efulan, Cameroons. One male in coll. B. Preston Clark, collected by Dr. H. L. Weber, and received in exchange from my friend Dr. William J. Holland of the Carnegie Museum.

This is perhaps the most beautiful of the known Temnoras, with variegated and strongly marked coloration. It is allied to T. wallastoni.

Antennae brown. Eye lashed. Palpus brown irrorated with blue, shading to tawny red on second and third segments. Dark brown along the eye. Head, thorax, and abdomen above, tawny red. Mesothoracic tegulae tipped with blue. Breast, legs, and abdomen beneath, rich red. Side tufts white. Two black spots on each segment beneath; border of each segment beneath tipped with bluish white. Cilia of both wings above and beneath yellow.

Fore wing above: In general shape like T. wallastoni. Distal margin blunt, SC4-SC5; concave from SC5 to R2; then concave between every vein from R2 to the hinder angle, which is bluntly produced. A dark triangular area 5 mm . in width on costal margin, and slightly apical of its median point, narrows to a blunt point on R3, whence it extends as a broad line to the distal margin, reaching it at M1. Basad of this line the general color of the wing is light olive green, crossed with darker markings.

A heavy and a light line, both brown, cross the wing sub-basally. A brown antemedian line extends from a point on the inner margin 6 mm . from the base to the costal margin, which it reaches 7 mm . from the base. It curves basad during its entire length. Posterior to this line, parallel to it, and 2 mm . distant, is a second one. These two lines are connected by a heavy brown line, M2-SM2, and costally of this heavy line there runs midway between the two parallel lines a third one. There is light blue scaling at the base of the wing, and between SM2 and the inner margin, also at the hinder angle. Two irregular, brown, postmedian lines, 1 mm . distant from each other, extend from a point midway on the inner margin to the dark brown costal triangular area, diverging as they go. The basal one reaches the triangle at the median point of its basal side, and the posterior one at its apex on R3. These two lines have between them and the hinder angle a dark area, narrowing and vanishing at M1. Apical of the dark costal triangle is a light blue area, extending 4 mm . apically on the costal margin, narrowing to R3, and including within it two dark lines. Apical of this area the wing apex is dark brown to R1, and heavily irrorated with light blue R1-R3.

Hind wing above: Unicolorous, dark brown. From M2 to SM2 is a light brown, marginal, semicircular patch, irrorated anally with light blue.

Fore wing below: Black from base more than half-way to the distal margin, then warm red. A light-colored stigma at apex of cell. A median and two postmedian lines extend from the costal to the inner margin. The median one is 10 mm ., and the outer of the postmedian ones is 5 mm ., distant from the apex on the costal margin. The wing is shaded darker on the distal margin.

Hind wing below: Warm red, unicolorous. No markings except a lightcolored stigma at the apex of the cell and three lines similar to those on the fore wing.

## Macroglossum tenimberi sp. nov.

Al. ant. long., $\circ, 24 \mathrm{~mm}$. Al. ant. lat., $\odot, 9.5 \mathrm{~mm}$. Marg. ext., $\circ$, 14 mm .

Habitat. -Tenimber Islands, Dutch East Indies. One female in coll. B. Preston Clark, received from Mr. Donckier de Donceel, Paris.

This form is allied to M. phocinum and M. buruensis, being closest to the latter, which it simulates in color.

Head and thorax deep olive. Abdomen above blackish olive, third and fourth segments lighter in color, and each with a pair of black basal spots. No yellow side patches. Side tufts white; last two large. Second and third abdominal tergites tipped with white, forming two narrow belts, the anterior one more prominent. Palpi and breast dirty gray, rest of abdomen below brown.

Fore wing above: But one distinct band, antemedian, narrowing costally; second antemedian, and first and second discal lines, faint; two subapical patches, SC4-R1, faint. Hind wing above unicolorous. Both wings below brown, with no white at the base. Marginal band of each wing lighter in color. Fore wing reddish along the inner margin from the base two thirds of the distance to the hinder angle.

## Xylophanes mulleri sp. nov.

Al. ant. long., $\sigma^{7}, 32 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 11.5 \mathrm{~mm}$. Marg. ext., $\sigma^{7}$, 18 mm .

Habitat. - Misantha, Mexico. One male in coll. B. Preston Clark, taken in May, 1914, given me by my friend, Mr. Roberto Muller.

A form allied to $X$. eumedon, X. resta, and X. tersa.
Palpi red, shading to green on second segment, third segment gray. Antennae brown. Head, thorax, and abdomen above, olive brown. Fringe of mesothoracic tegulae pink. A red line on each side of mesothorax. Thorax below orange. Legs and abdomen below pink, with a darker pink side stripe.

Fore wing above: A dark brown curved postmedian line extends from the wing apex to the inner margin, which it reaches at a point 7 mm . from the base. This line is bordered basad by a lighter line, which extends along the inner margin to the base of the wing. This line diverges slowly from the distal margin, being only 5 mm . distant from it at M1. The entire wing area basad of this line is olive brown, except that the cell and an area between M2 and SM2 are dark pink. Posterior to this postmedian line is another narrower one, parallel to it, from the wing apex to the inner margin. Two narrow submarginal lines, distant 1 mm . and 2 mm . from the distal margin, extend from the wing tip to the hinder angle.

Hind wing above: In coloration and in maculation in all respects like that of $X$. eumedon, except that the light submarginal band extends qiute to the anal angle, and the dark marginal band is narrower. The peculiar reddish tinge of the light band of $X$. eumedon extends farther posteriorly, almost to the anal angle.

Fore wing below: Distal marginal band dull pink, narrowing sharply between R2 and R3. Dark vein dots basad of this band extend regularly from costal margin to inner margin. Basad of the marginal band is a yellow area irrorated with dark dots. Basal area olive, shading posteriorly to pink, with an ill-defined dark shade extending from the costal margin, at a point 7 mm . distant from the apex, obliquely in the direction of the inner margin, which it does not reach.

Hind wing below: Very close to $X$. tersa in maculation: lines, dots and margin. But the ground tone of the entire basal area of the wing is light pink, the marginal band is dull pink, and the median area a lighter yellow than in X. tersa.

## Xylophanes josephinae sp. nov.

Al. ant. long., $\sigma^{7}, 40 \mathrm{~mm}$. Al. ant. lat., $\sigma^{7}, 14 \mathrm{~mm}$. Marg. ext., $0^{7}$, 21 mm .

Habitat. - Cayuga, Guatemala. One male in coll. B. Preston Clark, given me by my friend Mr. William Schaus, who collected it in July, named after my wifc.

This form is so closely similar in its general coloration to X. damocrita that it might easily be mistaken for it. It is, however, very distinct.

It is a longer-winged insect. The length of the fore wing, 40 mm ., surpasses, by fully 5 mm ., that of any specimen of $X$. damocrita which has been measured, while in breadth of fore wing and in marginal extent it exceeds $X$. damocrita by but 1 mm .

The lines of the fore wing are much straighter than in X. damocrita.
Fore wing above: The postdiscal cloud near the apex of the cell is faint. Line 1 starts at a point on the inner margin 5 mm . distant from the base of the wing, is the heaviest line on the wing, and runs almost straight in gen-
eral direction, curving slightly costad, but with slight irregularities, to SC5, reaching it at a point 10 mm . from the distal margin, where it fades away. Lines $2,3,4$, are light, and run from points slightly distant from the inner margin, parallel to each other, nearly to the costal margin. They curve slightly costad, and diverge from line 1 anteriorly. Line 5 is broader than $2,3,4$, and runs from a point midway on the inner margin to the wing tip, curving distally as it approaches that point. Line 6 is faint, and runs from a point on the inner margin, midway between line 5 and the hinder angle, to the wing tip, curving toward line 5 as it approaches that point. Lines 7 and 8 run submarginally from the inner margin to the tip of the wing. There is less contrast in color than in $X$. damocrita.

Hind wing above: The submarginal band diverges somewhat more from the distal margin anteriorly than in $X$. damocrita.

Fore wing below: The black vein dots are less prominent than in $X$. damocrita.

Hind wing below: The median bands are less pronounced than in $X$. damocrita.

The genitalia show no marked differences from $X$. damocrita, but the claspers are somewhat more blunt at the tips.

## Basiothea medea ab. nigrita ab. nov.

Al. ant. long., $\sigma^{7}, 21 \mathrm{~mm}$.; $\quad$, , 20 mm . Al. ant. lat., $\sigma^{\top}, 9 \mathrm{~mm}$; ; $\quad, 8.5$ mm . Marg. ext., $0^{7}, 11.5 \mathrm{~mm}$., ,, 11 mm .

Habitat. - Tananarivo, Madagascar. One male and two females in coll. B. Preston Clark, received from Professor C. Lamberton.

The marked characteristic of this aberrant form is the color of the hind wing above. In normal medea the entire hind wing is yellow, except the dark marginal band, from which it is sharply separated. In this aberration the wing is warm reddish brown, shading gradually into the dark marginal band, but with no sharp line of demarcation. There is in addition a melanic tendency throughout the entire insect.

## Epistor latipennis R. \& J.

Epistor lugubris latipennis R. \& J. has been considered as the Jamaican subspecies of E. lugubris lugubris Linne. At Mandeville, 'Jamaica, during December, 1919, and January, 1920, Mr. F. E. Watson took both the broad- and the narrow-winged form. Examination of the genitalia shows the tooth of the left clasper to be shorter in this form. On the fore wing R2 is more projected. The two forms occur in one locality. It seems therefore proper to consider the Jamaican form as a distinct species, to be called Epistor latipennis (R. \& J.).

